

Virginia Department of Corrections

Interim Guideline for Chronic Hepatitis C Infection Management

I. Introduction

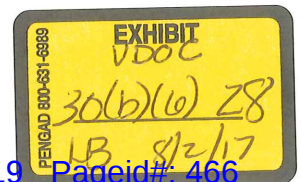
The Virginia Department of Corrections (VADOC) has an MOA with the VCU Medical Center Hepatology group to care for offenders with Hepatitis C and to provide medications for treatment. Management of Hepatitis C takes place over telemedicine by a Nurse Practitioner employed at VCU Medical Center. Requests for approval to refer for treatment should be sent by email to the Chief Physician as was done in the past. A response will be sent by email indicating whether or not the offender is approved for referral. It is important to send the entire requested lab results (initial lab evaluation) in submitting requests for treatment as well as a referral request form (Attachment 2). Offenders with more advanced liver disease will be approved for treatment. This will be determined by the AST Platelet Ratio Index (APRI) and/the Fib-4 score. The formula for calculating the APRI and the Fib-4 score is given in section III below. Offenders who have indeterminate APRI/FIB-4 results will require additional testing to determine the degree of fibrosis that is present prior to treatment and in that case an email will indicate to obtain such testing before treatment is approved. The decision to initiate treatment will be based on HCV disease severity, presence of co-morbid conditions, and having sufficient time remaining in the VADOC to complete the evaluation, treatment, and follow-up. A subset of offenders with decompensated cirrhosis who have controlled ascites and/ or controlled encephalopathy are eligible for treatment while offenders with more advanced decompensation are not eligible for treatment. See section IV for details on which offenders with decompensated cirrhosis are eligible for treatment.

When treatment is approved, it will take place at a facility with 24-hour Nursing staff so the medication can be given by Directly Observed Therapy. Individuals who will undertake medication treatment will be transferred to one of these facilities for the duration of treatment. Transfer should not be arranged until treatment has been approved/ or recommended by the consultant and the offender agrees to be treated. Once treatment has started, a medical hold should be done so the offender will not transfer during treatment.

This guideline contains medication regimens outlined in the American Association for the Study of Liver Disease (AASLD) Recommendations for Testing, Managing, and Treating Hepatitis C. The link for accessing the guideline is given below.

Guidelines can be accessed as below:

AASLD: go to www.hcvguidelines.org/
Click on "Access the Full Report"



- II. Diagnosis
 - A. Antibody Test—Tests for anti-HCV antibodies is the first screening test that should be done to evaluate for HCV Infection. If this is negative then no further evaluation is needed.
 - B. HCV RNA Assay—this should be done if the HCV Antibody test is positive or if the patient has a reason for a false-negative antibody test such as immune compromise. A Quantitative HCV RNA Assay should be performed as this is more sensitive than a qualitative assay.
 - C. Interpretation-
 - 1. A positive HCV RNA Assay confirms the presence of hepatitis C genetic material and confirms the presence of chronic infection.
 - 2. A positive Antibody test with a negative HCV RNA Assay suggests prior infection that has cleared spontaneously or with prior treatment, or a false-positive antibody test. A quantitative HCV RNA assay should be repeated in 6 months to confirm absence of infection.
- III. Screening for Hepatitis C
 - A. Screening for Hepatitis C should take place in the following cases:
 - 1. Offenders who are incidentally found to have abnormal liver enzymes at intake or at other times when abnormal liver enzymes are identified.
 - 2. Upon offenders request when they present and report risk factors including history of IV drug use, HIV or AIDS infection, multiple sex partners, received donated blood prior to 1992, liver disease is present, offender reporting blood exposure, offenders on hemodialysis, tattoos or piercings in prison or other controlled setting
- IV. Inclusion Criteria for consideration of treatment
 - A. HCV RNA positive
 - B. Offenders who enter the VADOC already on treatment for Hepatitis C will be continued on treatment until it is determined that treatment should be discontinued for reasons outlined in this guideline.
 - C. Referral for treatment based on AST Platelet Ratio Index and the Fib-4:**
 - 1. APRI > 1.5 AND FIB-4 > 3.25, then prioritize referral for treatment evaluation.
 - 2. If APRI > 0.5 and < 1.5 OR FIB-4 >1.45 and < 3.25
 - a. Refer to VCU Hepatology for a Fibroscan if your facility is in the Central or Eastern Region.
 - b. Refer to Pocahontas State Correctional Center for a FibroScan if your facility is in the Western Region. If your facility is in the Western Region but closer to VCU Medical Center, then refer the offender to VCU for Fibroscan. To schedule a FibroScan at PSCC call (276) 945-2833.
 - 3. If APRI is < 0.5 AND FIB-4 is < 1.45, defer treatment and follow per section XII below.

4. Offenders with Decompensated Cirrhosis who satisfy the following criteria re eligible for treatment referral and should be referred to the Hepatitis C Telemedicine Clinic:
 - a. Child-Turcotte-Pugh Class A or B (See Below)
 - b. MELD Score < 12 (See Below)
 5. Offenders with Decompensated Cirrhosis with Child-Turcotte-Pugh Class C or a MELD score >12 should be referred to VCU Hepatology Clinic for evaluation.
- D. Regardless of category in section IV.B. above, refer offender for consideration of treatment if there are other findings suggestive of advanced liver disease such as low albumin or Platelets, or elevated bilirubin or INR, or if there are extra-hepatic conditions that warrant treatment, such as symptomatic cryoglobulins, debilitating fatigue.
- E. Offenders with at least 9 months remaining on their sentence at the time of treatment initiation.
- F. Completion of the pre-treatment evaluation.
- G. Offenders who are willing to adhere to a rigorous treatment regimen and demonstrate a willingness to abstain from high-risk behavior while incarcerated.
- H. Offender should have shown good compliance with previously prescribed medication regimens.
- I. Liver Transplant Recipients—these offenders should be referred to the VCU Medical Center Offender Hepatology clinic for evaluation and recommendations.
- J. Offenders with HIV and/or chronic Hepatitis B co-infection will be evaluated and approved for referral using the same criteria as offenders without co-infection. Offenders co-infected with Chronic Active Hepatitis B may require treatment for that condition as well and if that is the case, will be referred to the Hepatology clinic for management.

**Calculation of the APRI:

$$(AST \div ULN) \times 100 \div \left(Platelet\ Count \times \frac{10^3}{uL} \div 1000 \right)$$

**Calculation of FIB-4:

$$(Age \times AST) \div [(Platelet\ count \times 10^3/uL \div 1000) \times Sq\ Root\ of\ ALT]$$

Note that FIB-4 Calculator can be found online at:

<http://www.hepatitisc.uw.edu/page/clinical-calculators/fib-4>

MELD Calculator can be found online at:

<http://www.mdcalc.com/meld-score-model-for-end-stage-liver-disease-12-and-older/>

Child-Turcotte-Pugh (CTP) Calculator

This calculator is used for the classification of the severity of cirrhosis.

	Points*		
	1	2	3
Encephalopathy	None	Grade 1-2 (or precipitant-induced)	Grade 3-4 (or chronic)
Ascites	None	Mild/Moderate (diuretic-responsive)	Severe (diuretic-refractory)
Bilirubin (mg/dL)	<2	2-3	>3
Albumin (g/dL)	>3.5	2.8-3.5	<2.8
PT (sec prolonged) or INR	<4 <1.7	4-6 1.7-2.3	>6 >2.3

CTP class (add score for each parameter):

A= 5-6 points

B= 7-9 points

C= 10-15points

V. Exclusion criteria

- Less than 9 months remaining on sentence at the time of treatment initiation.
- Founded charges during incarceration for the past 2 years, or documented use of alcohol or illegal injection drugs or other illegal substances known to contribute to progression of liver disease.
- Founded charges for tattoos (intra-dermal), or offender self-reporting of new tattoos, or medical documentation of new tattoos, in the past 2 years during incarceration.
- Exceptions to B and C will be considered on a case-by-case basis depending on the severity of disease.
- APRI < 0.5 AND FIB-4 < 1.45 without significant extra-hepatic conditions associated with HVC.

VI. Initial Laboratory Evaluation

- CBC
- CMP
- PT/INR
- Anti-HIV
- Quantitative HCV RNA(Viral Load)
- HCV Genotype
- Calculated GFR
- HgbA1C, and TSH if Genotype 3 or Genotype 5

- I. Serum Pregnancy Test in women
 - J. Anti-HAV total, HBsAg, HBsAb, and HBcAg(IgG) if not done with original hepatitis screening.
 - K. Consider testing for other liver conditions as appropriate (ANA, ASMA, A1AT, Iron Panel and Serum Ferritin, ceruloplasmin).
 - L. Offenders with documented cirrhosis should have a liver ultrasound every 6 months to evaluate for hepatocellular carcinoma as well as periodic upper endoscopy to evaluate for esophageal varices.
- VII. Evaluation Prior to Initiating Treatment(after approved)
- A. Offender should be transferred to a facility with 24-hour Nursing for Directly Observed Therapy. A medical hold should be placed on the offender once they are at the facility where they will be treated. The hold can be cancelled once treatment is complete.
 - B. Measure weight and vital signs.
 - C. Limited Physical Exam by the Physician to confirm the offender is medically stable.
 - D. Hepatitis A and Hepatitis B Vaccines
 - 1. All Hepatitis C positive offenders should be offered Hepatitis A and Hepatitis B Vaccine if not immune.
 - 2. Hepatitis A Vaccine and Hepatitis B Vaccine should be administered and immunization documented as outlined in the Virginia Department of Corrections Standard Treatment Guideline for Hepatitis A(HAV) Immunization and Treatment, and the Standard Treatment Guideline for Hepatitis B(HBV) Immunization and Treatment, respectively.
 - E. Make sure Hepatitis C Treatment Consent form is signed by **all** offenders (**Attachment 3**).
 - F. Make sure the Patient Information about PEG-Intron form is also signed if the offender will be treated with PEG-Intron along with other medications (**Attachment 4**).
- VIII. Monitor at the Facility During Treatment
- A. Follow regularly in clinic to ensure compliance, monitor adverse events and potential drug interactions with new prescriptions.
 - B. Any non-compliance with treatment should be reported to the Nurse Practitioner or the Hep C Telemed Clinic. The Nurse Practitioner is Reena Cherian, and she can be reached at (804) 828-9663.
 - C. Consider ordering the medication to be given in the morning or in the evening based on offender preference to improve compliance.
 - D. Whenever there are medication doses leftover at the end of treatment (due to non-compliance or other reason) continue the medication until all doses are taken, unless otherwise instructed by the Nurse Practitioner in the Hep C Telemed Clinic.

E. Testing should follow the table below:

(This is provided for informational purposes. All lab orders will be from the Hep C Telemedicine Clinic Nurse Practitioner.)

<u>Test</u>	<u>Week 4</u>	<u>Week 8</u>	<u>Week 12(EOT)</u>	<u>Week 16(if on Tx)</u>	<u>Weeks 24/36(SVR)</u>
BMP	x		x		x
HepPnl	x	x	x	x	x
Heme 8			x		x
HCV RNA	x		x		x
PT/INR(if					
Cirrhosis)	x		x		x

1. If quantitative HCV RNA viral load is detectable at week 4, repeat after 2 additional weeks.
2. If there is a <10-fold increase in ALT at week 4 in an asymptomatic person, this should be closely monitored and rechecked at week 6 and week 8. (See section XI. Below for further instructions on managing ALT abnormalities)
3. For regimens that include Ribavirin a Heme 8 should be checked at week 2 and at week 4 after initiation of treatment, and monthly thereafter.
4. Regimens that include Peg-Interferon should have a CMP and CBC monthly and a TSH every 12 weeks while on treatment.
5. Repeat Quantitative HCV RNA at 12 weeks after completion of treatment. Fax or email result to VADOC Medical Director, Dr. Mark Amonette [fax #: (804)674-3551].

F. Adjusting Medication Dosage

1. Harvoni(Ledipasvir/Sofosbuvir)—no indications for dosing adjustment.
2. Sovaldi(Sofosbuvir)—no indications for dosing adjustment.
3. Peg Intron—See Attachment 1
4. Ribavirin—See Attachment 1

IX. Request for Approval to Treat or Refer—Fax or email the following information to the VADOC Medical Director, Dr. Mark Amonette[fax #(804)674-3551]:

- A. All lab results as listed in section V. Pretreatment Labs(performed within the previous 12 weeks). If any requested labs are omitted the request will not be processed.
- B. A completed Hepatitis C Treatment Request form. (See Attachment 2)

- C. Approval will be sent by email. This will include the medication regimen approved and any special instructions.
- X. Medication Contraindications, Side Effects, Significant Drug Interactions (These are medication highlights. See other source such as PDR or package insert for full prescribing information)
- A. Ledipasvir plus sofosbuvir (Harvoni)
1. Contraindication: GFR < 30 mL/min
 2. Side Effects: Fatigue, HA, Nausea, Diarrhea, Insomnia, elevated bilirubin, elevated lipase (transient, asymptomatic).
 3. Drug Interactions
 - a. Acid Reducing Agents—Separate antacid dose from Harvoni by at least 4 hours. Give H2 antagonist comparable to famotidine 40 mg BID 12 hours apart from Harvoni. PPI comparable to omeprazole 20mg or less can be administered with Harvoni under fasting conditions.
 - b. Digoxin—monitor digoxin levels which can be increased.
 - c. Anticonvulsants—Do not co-administer with Harvoni. (Keppra may be OK).
 - d. Rifampin, Rifabutin, Rifapentine—Do not co-administer with Harvoni.
 - e. HIV Antiretrovirals—Co-infected offenders will not be approved at this time. They will be approved for referral to the VCU Hepatitis C Telemedicine clinic when it is available, for management by a Hepatologist.
 - f. Simeprevir—do not co-administer with Harvoni.
 - g. St. John's wort—do not co-administer with Harvoni.
 - h. Rosuvastatin—do not co-administer with Harvoni.
 - i. Do not administer with Amioderone.
- B. Sofosbuvir (Sovaldi)
1. Contraindication: GFR < 30 mL/min. See contraindications to meds used in combination (Peg-Intron and/or Ribavirin).
 2. Side effects: no clinical trials for sofosbuvir used alone. See side effects for other meds used in combination with sofosbuvir.
 3. Drug Interactions
 - a. Anticonvulsants—do not co-administer with sofosbuvir.
 - b. Rifampin, Rifabutin, Rifapentine—Do not co-administer with sofosbuvir.
 - c. St. John's wort—do not co-administer with sofosbuvir.
 - d. HIV Protease Inhibitors—tipranavir/ritonavir—Do not co-administer with sofosbuvir.
- C. Daclatasvir (Daklinza)
1. Contraindications: Use in combination with drugs that strongly induce CYP3A which causes loss of anti-viral activity.
 - a. Anticonvulsants: Phenytoin, carbamazepine

- b. Antimicrobials: Rifampin
 - c. Herbals: St. John's Wort
- 2. Side Effects
 - a. Serious symptomatic bradycardia when co-administered with sofosbuvir and Amiodarone.
 - b. Headache, Fatigue, Nausea, Diarrhea
 - c. Lipase elevation: Transient and Asymptomatic
- 3. Drug Interactions
 - a. Strong CYP3A inhibitors (increased Daclatasvir concentration): Examples: atazanavir/ritonavir, clarithromycin, indinavir, itraconazole, ketoconazole, nefazodone, nelfinavir, posaconazole, saquinavir, telithromycin, variconazole. Reduce Daklinza dose to 30 mg per day.
 - b. Moderate CYP3A inhibitors: Examples: atazanavir, Cipro, darunavir/ritonavir, diltiazem, erythromycin, fluconazole, fosamprenavir, verapamil. Monitor for Daklinza side effects.
 - c. Moderate CYP3A Inducers (decrease Daclatasvir concentration): Examples: bosentan, dexamethasone, efavirenz, etravirine, modafinil, nafcillin, rifapentine. Increase Daklinza dose to 90 mg per day.
 - d. Anticoagulants: Dabigatran etexilate mesylate. Use of Daclatasvir with this drug not recommended.
 - e. Cardiovascular Agents
 - i. Amiodarone: Effect on daclatasvir unknown. Use of amiodarone with daclatasvir and sofosbuvir not recommended (see package insert if co-administration is required)
 - ii. Digoxin increases digoxin levels. See package insert for instructions on coadministration.
 - f. Lipid lowering agents: Increases concentration of HMG-CoA reductase inhibitor. Monitor for HMG-CoA reductase inhibitor side effects.
- D. Peg-Intron
 - 1. Contraindications:
 - a. Hypersensitivity to interferon
 - b. Platelet count $< 75,000/\text{mm}^3$
 - c. ANC $< 1,500 \text{ cells}/\text{mm}^3$
 - d. Severe uncontrolled psychiatric illness, esp. depression, history of suicide attempts—refer all patients on psychotropic medications or with a history of major depression to Mental Health for evaluation and clearance for treatment.
 - e. History of solid organ transplant.
 - f. Certain Autoimmune Disorders (such as autoimmune hepatitis).
 - g. Uncontrolled endocrine disorder (such as diabetes, thyroid disease). For diabetes, the HgbA1C should be ≤ 9.0 before treatment is started.
 - h. Serious concurrent medical disease (such as severe HTN, CHF, CAD, COPD)
 - i. Decompensated Cirrhosis

- j. Documented non-compliance with prior therapy
- k. Failure to complete pretreatment evaluation.
- l. Ongoing use of injection drugs or alcohol.
- 2. Side Effects: May cause or exacerbate fatal or life-threatening neuropsychiatric illness, autoimmune disease, ischemic disease, infectious diseases. May aggravate cardiovascular disease, cerebrovascular disorders, colitis, dermatologic conditions including local injection reactions, autoimmune disorders, endocrine disorders. May cause severe cytopenias, flu-like symptoms, GI side effects, severe and sometimes fatal infections, hypersensitivity reactions including anaphylaxis, hepatitis exacerbations and liver failure which can be fatal, retinopathy and loss of vision, pancreatitis which can be fatal, renal failure, seizures, and triglyceride elevations.

E. Ribavirin

1. Contraindications:

- a. Hypersensitivity to Ribavirin
- b. Hgb \leq 12 g/dL in men or \leq 11g/dL in women
- c. Pregnancy—Ribavirin should not be given during pregnancy or within 6 months and pregnancy should be prevented within 6 months of Ribavirin therapy in both male and female partners.
- d. Significant Cardiac Disease(arrhythmias, angina, CABG, MI) in the past 12 months
- e. Thalassemia or other hemoglobinopathy.

- 2. Side Effects: Hemolytic Anemia which can precipitate Myocardial Infarction. Teratogenic effects. Can also have dermatologic side effects; cause flu-like symptoms, GI symptoms, cytopenias, liver decompensation and death, hypersensitivity reactions including anaphylaxis, and pulmonary symptoms.

3. Drug Interactions

- a. Nucleoside Analogues—Closely monitor for toxicity
- b. Azathioprine —Do not give with Ribavirin

XI. Treatment Regimens—

- A. All medications for HCV Infections are to be administered by Directly Observed Therapy. Self-med administration is not permitted.

B. Medication Dosages

- 1. Harvoni(ledipasvir 90 mg/sofosbuvir 400mg) 1 po qday
- 2. Sovaldi(sofosbuvir 400mg) 1 po qday
- 3. Ribavirin 200mg capsules, weight-based given in divided doses BID:
 - a. Weight \leq 165 lbs(\leq 75 kg) give Ribavirin 400mg qam and 600mg qpm
 - b. Weight >165 lbs(> 75 kg) give Ribavirin 600mg qam and 600mg qpm
- 4. Peg-Intron is given weight-based at 1.5 mcg/kg body weight, by subcutaneous injection once per week to a maximum dose of 150mcg according to the following:

Body Weight (pounds)	PEG-Intron Vial Strength	PEG-Intron Dose(mcg) to Administer	Volume(mL) of PEG-Intron to Administer
<88 lbs	50mcg/0.5mL	50mcg	0.5mL
88-111 lbs	80mcg/0.5mL	64mcg	0.4mL
112-133 lbs	80mcg/0.5mL	80mcg	0.5mL
134-166 lbs	120mcg/0.5mL	96mcg	0.4mL
167-187 lbs	120mcg/0.5mL	120mcg	0.5mL
>187 lbs	150mcg/0.5mL	150mcg	0.5mL

C. Medication Regimens for Treatment-Naïve Offenders

1. Genotype 1a and 1b Disease
 - Harvoni(Ledipasvir 90mg/sofosbuvir 400mg) x 12 weeks
 - Consider Ribavirin in those with cirrhosis
2. Genotype 2 Disease
 - Sovaldi(Sofosbuvir 400mg) x 12 weeks plus Weight-based Ribavirin x 12 weeks
 - Consider 16 weeks if cirrhosis is present
3. Genotype 3 Disease
 - a. Daily delectasvir and sofosbuvir
 - Give for 12 weeks if no cirrhosis
 - Give for 24 weeks with or without weight-based Ribavirin if cirrhosis is present
 - b. Daily sofosbuvir and weight-based ribavirin plus weekly PEG-IFN for 12 weeks if IFN-eligible
 - c. Alternative regimen
 - Daily sofosbuvir and weight-based ribavirin for 24 weeks
4. Genotype 4 and Genotype 6 Disease
 - Harvoni(Ledipasvir 90mg/sofosbuvir 400mg) x 12 weeks
5. Genotype 5 Disease
 - Sovaldi(Sofosbuvir 400mg) x 12 weeks plus

Weight-based Ribivirin x 12 weeks plus

Peg-Interferon injection weekly x 12 weeks

D. Medication Regimens for Offenders Who Have Failed Prior Treatment with Peg-Intron and Ribavirin +/- Boceprevir or Telaprevir.

1. Genotype 1a and Genotype 1b without Cirrhosis

--Harvoni(Ledipasvir 90mg/sofosbuvir 400mg) x 12 weeks

2. Genotype 1a or Genotype 1b with Compensated Cirrhosis

--Harvoni(Ledipasvir 90 mg/Sofosbuvir 400mg) x 24 weeks

Or

--Harvoni plus weight-based Ribavirin x 12 weeks

3. Genotype 2 Disease

--Sovaldi(Sofosbuvir 400mg) x 12 weeks plus

Weight-based Ribavirin for 12 weeks if no cirrhosis

**Extend treatment to 16 weeks if compensated cirrhosis is present.

4. Genotype 3 Disease

a. Daily declatasvir and sofosbuvir

--Give for 12 weeks if no cirrhosis

--Give for 24 weeks with weight-based Ribavirin if cirrhosis is present

b. Daily sofosbuvir and weight-based ribavirin plus weekly PEG-IFN for 12 weeks if IFN-eligible

5. Genotype 4 Infection and Genotype 6 Infection

--Harvoni(Ledipasvir 90 mg/sofosbuvir 400mg) x 12 weeks

6. Genotype 5 Infection

--Sovaldi(Sofosbuvir 400mg) x 12 weeks plus

Weight-based Ribavirin x 12 Weeks plus

Peg-Intron injection weekly x 12 weeks

XII. Discontinuation of Treatment

- A. The decision to discontinue treatment will generally be made by the VCU HepC Telemed Nurse Practitioner and treatment should not be discontinued without first discussing with the VCU Hep C Telemedicine Clinic Nurse Practitioner.

Immediately discontinue treatment if there is:

1. A ≥ 10 -fold increase in ALT at week 4 or beyond of treatment.
2. Any increase in ALT of < 10 -fold at week 4 if accompanied by any weakness, nausea, vomiting, jaundice or by an increased bilirubin, Alkaline Phosphatase, or PT/INR.
3. NON-RESPONSE to treatment:
If the quantitative HCV RNA is detectable at week 4 this should be repeated in 2 weeks. If quantitative HCV RNA has increased by > 10 -fold ($> 1 \log_{10}$ IU/mL) on repeat at 6 weeks or later, treatment should be discontinued due to treatment failure. If there is a < 10 -fold increase in HCV RNA at week 6, do not stop treatment but repeat HCV RNA in another 2 weeks. If there is a < 10 -fold increase in HCV RNA at week 6 or week 8, do not discontinue treatment.
4. If a new tattoo appears or offender receives a founded tattoo charge.
5. If a positive drug screen is reported.
6. If a blood alcohol test is positive.
7. If an offender on Hepatitis C treatment has a founded charge for tattoos, drug or alcohol use, before discontinuing treatment, this must be discussed with the Chief Physician. Decisions regarding discontinuation of treatment in these circumstances will be made on a case-by-case basis.
8. If offender demonstrates non-compliance with medication.

XIII. Monitoring Offenders Who are not a Candidate for Treatment

- A. Most offenders who are not eligible for treatment can be monitored once per year.
- B. Offenders with HIV or other immunocompromised condition, or with Genotype 3 disease, should be monitored every 6 months.
- C. Monitoring should include clinical evaluation and CMP, CBC, PT/INR and calculation of APRI and FIB-4. Refer for treatment as indicated if disease progresses.
- D. For offenders who fall into and remain in the middle group (section IV.C.2 on page 2) a FibroScan should be done every 3 years even if other labs do not suggest disease progression.

Signature on file

Mark Amonette, MD Chief Physician

Revised 06/16

REFERENCES

Interim Guidance for the Management of Chronic Hepatitis C Infection.
Federal Bureau of Prisons, Clinical Practice Guideline. June 2014. At
http://www.bop.gov/resources/health_care_mngmt.jsp.

PEGINTRON in Physicians' Desk Reference 68th Edition 2014. PDR Network, LLC,
Montvale, NJ. 2013. Pp1684-1699.

Recommendations for Testing, Managing, and Treating Hepatitis C. At
<http://www.hcvguidelines.org/>. American Association for the Study of Liver
diseases and the Infectious Diseases Society of America. 2015

Standard Treatment Guideline, Hepatitis C. Commonwealth of Virginia, Department of
Corrections. February 18, 2004.
CDC: Hepatitis C Information on Testing & Diagnosis. www.cdc.gov/hepatitis
October 2013

**Dosage Modification of Peg-Intron and Ribavirin based on
Laboratory Values During Treatment Monitoring (See Below)**
(No adjustments should be made in medication dosages without discussing with the
Hep C Nurse Practitioner.)

<u>Laboratory Test</u>	<u>Value</u>	<u>Peg-Intron Dose</u>	<u>Ribavirin Dose</u>
Hemoglobin	10-11 g/dL	No change	No change if asymptomatic Decrease by 200 mg/day if symptomatic
Hemoglobin	8.5 to <10.0 g/dL	No Change	Reduce Dose per Note 2**
Hemoglobin	<8.5 g/dL	Discontinue Until Resolved	Discontinue Until Resolved
WBC	1.0 to < 1.5 x 10 ⁹ /L	Reduce Dose per Note 1*	No Change
WBC	< 1.0 x 10 ⁹ /L	Discontinue Until Resolved	Discontinue Until Resolved
Absolute Neutrophils	0.5 to < .75 x 10 ⁹ /L	Reduce Dose per Note 1*	No Change
Absolute Neutrophils	< .50 x 10 ⁹ /L	Discontinue Until Resolved	Discontinue Until Resolved
Platelet Count	25 to < 50 x 10 ⁹ /L	Reduce dose per Note 1*	No Change
Platelet Count	< 25 x 10 ⁹ /L	Discontinue Until Resolved	Discontinue Until Resolved

*Note 1: For Peg-Intron the 1st Dose Reduction should be to 1 mcg/kg/week and closely monitor the abnormal lab. If abnormality persists, the 2nd Dose Reduction should be to 0.5 mcg/kg/week. See Dosing Table Below for 1st and 2nd Peg-Intron Dosing Reductions.

**Note 2: For Ribavirin, the 1st dose reduction is by 200 mg/day and closely monitor lab abnormality. If abnormality persist a 2nd dose reduction of an additional 200mg per day should be done. Patients who are receiving 600mg of Ribavirin daily should take one 200mg cap in the morning and two 200mg caps in the evening.

***Patients with stable cardiac disease. For patients with a history of stable cardiac disease receiving Peg-Intron in combination with Ribavirin, the Peg-Intron dose should be reduced to half and the Ribavirin dose by 200mg/day if a >2g/dL decrease in hemoglobin is observed during any 4 week period. If the patient ever has a hemoglobin level <8.5 g/dL or if the patient continues to have hemoglobin levels <12g/dL for 4 weeks after Ribavirin dosage reduction, both PEG-Intron and Ribavirin should be permanently discontinued.

Attachment 1 (Cont.)

Body Weight (pounds)	1 st Dose Reduction of Peg-Intron to 1 mcg/kg/week		Volume to Give(weekly) (mL)
	Peg Intron Vial Strength	Amount to Give (weekly) (mcg)	
<88	50mcg/0.5mL	35mcg	0.35mL
88-111	50mcg/0.5mL	45mcg	0.45mL
112-133	50mcg/0.5mL	50mcg	0.5mL
134-166	80mcg/0.5mL	64mcg	0.4mL
167-187	80mcg/0.5mL	80mcg	0.5mL
188-230	120mcg/0.5mL	96mcg	0.4mL
231-275	120mcg/0.5mL	108mcg	0.45mL
>275	150mcg/0.5mL	135mcg	0.45mL

Body Weight (pounds)	2 nd Dose Reduction of Peg Intron to 0.5 mcg/kg		Volume to Give(weekly) (mL)
	Peg Intron Vial Strength	Amount to Give(weekly) (mcg)	
<88	50mcg/0.5mL	20mcg	0.2mL
88-111	50mcg/0.5mL	25mcg	0.25mL
112-133	50mcg/0.5mL	30mcg	0.3mL
134-166	50mcg/0.5mL	35mcg	0.35mL
167-187	50mcg/0.5mL	45mcg	0.45mL
188-230	50mcg/0.5mL	50mcg	0.5mL
231-275	80mcg/0.5mL	64mcg	0.4mL
>275	80mcg/0.5mL	72mcg	0.45mL

Hepatitis C Referral Request

Offender Name	DOB	DOC ID#	Date
		YES NO N/A	
1.	Does the offender have a least 9 months remaining on his/her sentence?	___ ___	
2.	Has the offender received a charge for use of alcohol or illegal drugs in the past 2 years?	___ ___	
3.	Has the offender received a charge for tattoos in the past 2 years?	___ ___	
4.	Does the offender have clinical signs/symptoms of decompensated Cirrhosis (Ascites, Encephalopathy, Esophageal Varices)?	___ ___	
5.	If "yes" to # 4, What is the offenders Child-Turcotte-Pugh Class And MELD score	_____ _____	
6.	Is the offender pregnant?	___ ___ ___	
7.	What is the APRI Score? $[(AST \div ULN) \times 100 \div (Plt \text{ Ct} \times 10^3 / uL \div 1000)]$	_____	
8.	What is the FIB-4 Score? (Age x AST) $\div [(Plt \text{ count} \times 10^3 / uL \div 1000) \times Sq \text{ Rt of ALT}]$	_____	
9.	Does the offender have an uncontrolled major illness (eg. HTN, DM, CAD, CHF, Asthma, COPD, Thyroid Ds or other)? Specify: _____		
10.	Has the offender been compliant with previously prescribed medications?	___ ___	
11.	List any other medical conditions the offender has: _____ _____ _____		

Fax or email this completed form along with the following labs to the VADOC Medical Director [fax# (804)674-3551]: CBC, CMP, PT/INR, HIV, HCV Viral Load, HCV Genotype, and Calculated GFR. If Genotype 3 include: TSH, HgbA1C.
Any omitted information will constitute an incomplete request which will not be processed.

 Person completing form (print)

 Facility

 Contact Phone #

Hepatitis C Treatment Consent

Patient Initial each:

- ___1. I understand that treatment may be of no benefit and may not get rid of my Hepatitis C Infection.
- ___2. I understand that my medication treatment may be different than the treatment of another offender and will be determined by specific circumstances related to my infection(such as Genotype, presence of cirrhosis, past treatment history).
- ___3. I understand that if I am prescribed Harvoni(ledipasvir plus sofosbuvir) or Sovaldi(sofosbuvir) that side effects may include but not be limited to fatigue, headache, nausea, diarrhea, insomnia, elevated liver test(bilirubin), elevated pancreas test(lipase).
- ___4. I understand that if I am prescribed Ribavirin that side effects may include but not be limited to severe anemia(low blood count) which has been known to cause a heart attack, and birth defects and fetal death, as well as rashes, flu-like symptoms, Lung impairment, gastrointestinal symptoms, liver decompensation and death, and other reactions that can lead to death. Also, I should not take Ribavirin if I have had significant heart problems in the past 12 months, have unstable heart disease(angina or chest pain), or if I am pregnant or am male and could impregnate a women(during pregnancy or within 6 months of becoming pregnant in the man or woman).
- ___5. I understand that if my labs during treatment indicate that I am not responding to treatment or if I have certain abnormal labs, my treatment may be stopped early.
- ___6. I understand I may be tested for HIV Infection before being approved for treatment because the presence of the HIV virus can seriously affect my Hepatitis C.
- ___7. I understand that I may require regular blood work to be drawn during treatment to monitor side effects or response to treatment and that I need to cooperate with having blood drawn. Also, that failure to cooperate with having blood work done may result in discontinuation of treatment.
- ___8. I understand that I must not become pregnant or attempt to impregnate my partner during my Hepatitis C antiviral treatment or for 6 months after stopping treatment. Also, that I must use two forms of birth control during heterosexual activity while taking the medication and for 6 months after the medication is stopped. Ribavirin can cause fetal abnormalities and death.
- ___9. I understand that my failure to comply with the medication, blood testing, or regular appointments may result in my provider stopping the medication treatment.
- ___10. I understand that drinking alcohol is forbidden and causes injury to the liver.
- ___11. I understand that I must not be involved in any activity that may transmit the Hepatitis C virus including tattooing, sexual activity in prison, IV drug use, intranasal drug use. Being involved in any of these activities may result in loss of eligibility for treatment or stopping treatment that has been started.

Attachment 3 (Cont.)

___12. I understand that I may be required to undergo random blood or urine testing for illegal substances and that a positive test may result in stopping, or loss of eligibility to take the Hepatitis C medications.

___13. I understand that completion of this agreement does not guarantee that I will be approved for Hepatitis C treatment.

___14. My initials above and signature below signify my understanding of and agreement to comply with the requirements. I understand that failure to comply with the requirements may result in loss of eligibility for treatment or in discontinuation of treatment already in progress.

___15. I understand that if I am not at a 24-hour Nursing facility I will have to be transferred to a 24-hour facility while I am taking medication for Hepatitis C.

___16. I understand that if I take treatment and am cured of my Hepatitis C infection, this will **not** protect me from becoming re-infected if I participate in risky behavior such as IV drug use, getting tattoos, or having sex with an infected person.

___17. For offenders who are parole eligible when treatment is started, medical will recommend that parole be delayed until treatment is completed

Patient Name _____ Clinician Name _____

Signature _____ Date _____ Signature _____ Date _____

Patient Information about PEG-Intron**Patient Initial Each:**

- ___ Peg-Intron may cause serious psychological problems or may worsen any current psychological problems.
- ___ Peg-Intron is taken by injection once per week.
- ___ In some cases, Peg-Intron may actually worsen liver disease. If this occurs, treatment will be immediately discontinued.
- ___ Routine blood tests will be required to monitor side effects of the medication.
- ___ If you have certain side effects from treatment, your dose may need to be reduced or treatment may have to be stopped.
- ___ Most patients who take Peg-Intron have "flu-like" symptoms of headache, fatigue, muscle ache, and fever. Ibuprofen or Acetaminophen can be taken to reduce these symptoms, but they should be reported at your next visit to medical.
- ___ Some patients experience worsening of depression or other mental health problems. If this occur you should report this to medical IMMEDIATELY.
- ___ Insomnia, thinning of hair, or rash may occur during therapy.
- ___ Like all medications, Peg-Intron can cause a number of other side effects. Discuss any symptoms you may be having at your next visit to medical.
- You should **not** take Peg-Intron if:
- ___ You are allergic to the medication.
- ___ You have any autoimmune disease.
- ___ You have high blood pressure or heart disease that is not under good control.
- ___ You have kidney failure or liver failure.
- ___ You have mental problems that are not under good control.
- ___ You have had a major organ transplant.
- ___ You have thyroid disease or diabetes that is not under good control.
- ___ You are currently being treated for cancer.

Nurse Educators Signature _____ Date _____

Patient's Signature _____ DOC# _____ Date _____